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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/646,669 | 08/22/2003 | Hiroshi Shirai | 21334-1238 | 1008 |

7590 05/04/2004

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| EXAMINER |
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HYEON, HAE M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
| 2839 | |

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,669

Applicant(s)

SHIRAI, HIROSHI

Examiner

Hae M Hyeon

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8/22/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

1. Figures 6(A) and 6(B) should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 5 recites the limitation "**the end** of the housing" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, and 5-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choy (5,997,332) in view of Fumikura (5,839,913) and Landman (3,701,071).

Choy discloses a card connector comprising a card connector 10 having a housing 12 mounted on a circuit board (not shown) and a guide member 22 having a flat-plate-form guide part 26 for guiding a card (not shown), a fastening part 28 with a barb 30 for fastening to the housing and a soldered part 42 disposed between the guide part 26 and the fastening part 28 and

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soldered to the circuit board. The housing 12 includes a press-fitting recess 210 for press-fitting the fastening part 28 to the housing 12. Also, the housing 12 includes a soldered part recess at each end for receiving the soldered part 42 of the respective guide member 22 (see Fig. 4).

However, Choy does not disclose the card having contact pads at one end of the card, contacts attached to the housing for mating with the contact pads of the card and fastening means disposed on the other end of the card from the contact pads for fastening the card to the circuit board.

Although Choy does not disclose the contacts of the card connector comprising contact parts for contacting the contact pads of the card and solder-connected parts soldered to the circuit board, it is well known in the art of an electrical connector that the card connector commonly uses a contact having a contact part and a solder-connected part. Fumikura discloses a card connector 10 comprising a housing 40 having a plurality of contacts 26 and 28 having contact parts 28b for contacting the contact pads of the card and solder-connected parts 28a soldered to the circuit board. Furthermore, the official notice is taken that a card having contact pads on one end for mating with a card connector is well known in the art of an electrical connector. The connector of Choy and Fumikura usually receives a card having contact pads.

While the contacts and the card are commonly known, both Choy and Fumikura do not disclose the card having fastening means for fastening the card to the circuit board. However, Landman discloses a card connector 10 comprising a fastener 52 that engages an opening 54 formed on a card 48 for fastening the card to a circuit board 14 and for holding the card in the connector 10. While claim 2 recites the fastening means to be a screw, Landman discloses the

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fastener 52 to be a latch. However, the latch and screw are two most commonly known types of fastening means.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the card connector taught by Choy such that it would have the contacts having contact parts and solder-connected parts as taught by Fumikura and the fastening means as taught by Landman because the contacts having contact parts and solder-connected parts are commonly known and used contact in a card connector and the fastening means of Landman would prevent a card from coming out off the card connector.

5. Claims 3, 4, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Choy, Fumikura, and Landman as applied to claims 1, 2, and 5-10 above, and further in view of Tondreault (5,769,668).

Claims 3, 4 and 11 recite the housing having an off-center projection and the card having a slot for preventing reverse insertion of the card into the card connector.

Choy, Fumikura, and Landman do not disclose the projection of the housing and a slot of the card. However, Tondreault discloses a card connector 10 comprising a housing 14 having an off-center projection 52 engaging a slot 50 formed on a card 12 in order for the card 12 to correctly engage the card connector 10.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the connector and the card taught by Choy such that the card connector would have an off-center projection and the card would have a slot as taught by Tondreault to provide the correct engagement between the card connector and the card.

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Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 6,042,411 and 6,419,513 B1 by Choy disclose a card connector. US Patent No. 5,184,961 by Ramirez et al. discloses a card connector having a projection and a card having a slot.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hae M Hyeon whose AU is 2839 and whose telephone number is 571-272-2093. The examiner can normally be reached on Mon.-Fri. (8:30-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynn D Feild can be reached on 571-272-2092. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the telephone number 571-272-2800 ext 39.

Any response to this action may be mailed to:

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

For additional information regarding this new address, which was effective May 1, 2003, see *Correspondence with the United States Patent and Trademark Office*, 68 Fed. Reg. 14332 (March 25, 2003).

Hae M Hyeon
Examiner
Art Unit 2839

hnh hnh

Hae Moon Hyeon